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**Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>							
1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				PE 0604264N: <i>Air Crew Systems Development</i>							
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	12.154	8.689	3.249	-	3.249	2.762	7.242	12.492	12.518	Continuing	Continuing
0606: <i>Aircrew System Development</i>	12.154	8.689	3.249	-	3.249	2.762	7.242	12.492	12.518	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Aircrew Systems Development program provides Engineering and Manufacturing Development of Aviation Life Support Systems to protect aircrews from current and future threats including: directed energy weapons, chemical/biological/radiological agents/fallout, ballistic projectiles, temperature extremes, heat/fire, low concentration oxygen environments, high dynamic forces during emergency egress, and high "G" forces. The program also provides development for the following capabilities: night vision capability, head protection, communications, clothing, in flight restraint and stability emergency egress and descent, escape and evasion, survival and rescue, crash protection, and anthropometric sizing for small aircrew. Acquisition initiatives include: competition, the application of streamlining initiatives, use of non-developmental items, joint and tri-service developments, and the pursuit of NATO/allied cooperative ventures, which expedite introduction of new products into Navy and Marine Corps fixed and rotary wing aircraft, reduce costs, and promote commonality.

Enhanced Visual Acuity (EVA) previously called Wide Field of View (WFOV) - Night Vision has been focused to provide enhanced visibility in degraded visual environments and enhanced field of view. FY11-16 program realigns from Other Procurement Navy (OPN) to Research Development Test & Evaluation due to the program being placed back into Science & Technology (S&T) development. Procurement will not begin until FY18. This resulted in a reduction of \$2.686M in FY11; which was transferred for additional S&T efforts for the Night Vision Program, and increases in FY12-16 taken from the WFOV OPN line.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
Previous President's Budget	12.513	8.689	3.786	-	3.786
Current President's Budget	12.154	8.689	3.249	-	3.249
Total Adjustments	-0.359	-	-0.537	-	-0.537
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.217	-			
• Program Adjustments	-	-	-0.462	-	-0.462
• Section 219 Reprogramming	-0.142	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.075	-	-0.075

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0604264N: <i>Air Crew Systems Development</i>
<p><b><u>Change Summary Explanation</u></b></p> <p>Schedule:</p> <p>1. Acquisition Milestones:</p> <p>A. Aircrew Endurance (AE) - Milestone (MS) C changed from 1Q11 to 3Q11. Aligned to coincide with current acquisition strategy.</p> <p>B. AE - Initial Operational Capability (IOC) changed from 1Q12 to 3Q12. Aligned to coincide with current acquisition strategy.</p> <p>C. Common Mobile Aircrew Restraint System (CMARS) - Milestones removed and replaced with work stoppage and contract closeout due to N88 decision to defund the CMARS Program.</p> <p>D. Non-Ejection Seat Endurance (NESE) - Details added to the schedule. Full Rate Production Decision (FRPD) is 2Q11 to coincide with current acquisition strategy.</p> <p>E. NESE - Initial Operational Capability (IOC) is 1Q12 to coincide with current acquisition strategy.</p> <p>2. Test and Evaluation:</p> <p>A. AE - DT changed from 1Q09-1Q11 to 1Q09-3Q11 due to redesign and requalification testing.</p> <p>B. CMARS - All testing removed due to defunding of program.</p> <p>C. Laser Eye Protection (LEP) - Developmental Testing (DT) changed from 3Q10-2Q11 to 1Q11-1Q12. Delay in Acquisition Decision for contract award.</p> <p>D. Flight Deck Cranial (FDC) - DT changed from 4Q08-3Q10 to 4Q08-2Q11. Realigned component &amp; system level test requirements.</p> <p>3. Production Milestones:</p> <p>A. AE - Full Rate Production(FRP) changed from 1Q11 to 4Q11. Aligned to coincide with current acquisition strategy.</p> <p>B. AE - Deliveries changed from 2Q09-4Q15 to 3Q09-4Q16 due to extension of DT.</p> <p>C. CMARS - Production milestones removed due to defunding of program.</p> <p>Technical: N/A</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604264N: Air Crew Systems Development				PROJECT 0606: Aircrew System Development			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
0606: Aircrew System Development	12.154	8.689	3.249	-	3.249	2.762	7.242	12.492	12.518	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
AIRCREW SYSTEMS: Aircrew Endurance (AE), Laser Eye Protection (LEP), Flight Deck Cranial (FDC), Joint Helmet Mounted Cueing System (JHMCS), Night Vision Cueing and Display (NVCD), Enhanced Visual Acuity (EVA) and Aircrew Systems (AS).											
Under the above projects, AE includes Survival Vests & Armor, Universal Camouflage, Waste Management, Hydration and Cooling. LEP includes Laser Eye Self Protection, Multi-Wavelength Spectacles and Laser Eye Protection Improvement Program (LEPIP). FDC includes Improved Hearing Protection. JHMCS NVCD includes JHMCS Night Attack. EVA includes Non-Ejection Wide Field of View (WFOV) Night Vision Goggles (NVG), future Ejection (Non-JHMCS) WFOV NVG, and enhanced visibility in degraded visual environment technology. AS includes State of the Art (SOA), Modular Aircrew Common Helmet											
AIRCRAFT SYSTEMS: Ejection Seat Endurance (ESE) includes aircrew endurance modifications for F/A-18 aircraft. Common Mobile Aircrew Restraint System (CMARS) includes a retractor system for rotary wing aircraft. Aircraft systems include studies for Advanced Crash Protection (ACP), Crashworthy Troop Seats (CWTS), Oxygen Systems and Non-Ejection Seat Endurance (NESE).											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Aircrew System Development							11.261	7.188	2.614	-	2.614
							0	0	0		0
Description: AE includes Survival Vests & Armor, Universal Camouflage, Waste Management, Hydration and Cooling. LEP includes LEP Spectacles (both Self Protection and Multi-Wavelength), step-in visor and LEPIP. FDC includes Improved Hearing Protection. JHMCS NVCD includes JHMCS Night Attack. EVA includes Non-Ejection WFOV NVG, future Ejection (Non-JHMCS) WFOV NVG and enhanced visability in degraded visual environment technology. AS includes SOA, Modular Aircrew Common Helmet.											
FY 2010 Accomplishments:											
AE: Conducted qualification testing of survival vest and armor for integration, compatability and performance to meet program Key Performance Parameters and Key System Attributes (KSA). Testing final color selection for universal camouflage and researching components color availability for Aviation Life Support System items. Completed procurement of the Advanced Mission Extender Devices.											

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604264N: Air Crew Systems Development		PROJECT 0606: Aircrew System Development			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>LEP: Completed source selection and award of the Engineering, Manufacturing and Development Contract for the fixed wavelength self/hazard and/or threat protection spectacles; conducting optical, environmental, and laser saturation testing.</p> <p>FDC: Continued verification and evaluation of the Integrated modular system.</p> <p>JHMCS NVCD: Completed testing and logistics planning. Reached Milestone C (MS C) and began process for initial procurement of Low Rate Initial Production units.</p> <p>WFOV: Conducted studies on digital technology development and monitor Science &amp; Technology (S&amp;T) to determine technology suitability for non-ejection seat NVG platforms. Provided supplemental funding in support of the Defense/Industry development of Sensor and Micro-Display Technology.</p> <p>SOA: Tested ballistic eye protection sunglasses and flight deck goggles; tested of Garmin GPSMAP 60Cx handheld Global Positioning System as evasion optional item; tested two piece flight suit; evaluation of vortex monocular, knee and elbow pads, drifire and massif skullcaps and alternative cold weather jacket and pant.</p> <p><b>FY 2011 Plans:</b></p> <p>AE: Complete fleet assessment for survival vest and armor and conduct Full Rate Production (FRP) Acquisition Decision Review.</p> <p>LEP: Complete Developmental Testing (DT) to include cockpit compatibility, flight tests and system validation/ verification for spectacles. Complete MS C and begin procurement of basic spectacles.</p> <p>FDC: Complete FDC Double Hearing Protection verification and evaluation. Qualify FDC Cranial and Triple Hearing Protection solutions. Complete Phase II (Preliminary design of the ship alteration), Phase III (Detailed design of the ship alteration) and Phase IV (Implementation of the ship alteration) shipboard integration.</p> <p>JHMCS NVCD: Continue the completion stages of systems integration and work any required engineering changes discovered during Operational Testing (OT).</p> <p>WFOV: Continue Analysis of Alternatives on digital technology development and monitor S&amp;T to determine technology suitability for non-ejection seat NVG platforms.</p> <p>SOA: Continue a yearly evaluation and authorization of the survival and clothing items.</p> <p><b>FY 2012 Base Plans:</b></p> <p>AE: Deliver AE vest system. Initial Operational Capability (IOC) of the AE vest system. Procure additional quantities.</p> <p>LEP: Complete DT on second increment Spectacles and begin procurement. Begin development and test of visor.</p> <p>FDC: Complete FDC System verification and evaluation. Complete the final phase of the shipboard integration.</p>							

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
JHMCS NVCD: Address any required engineering changes discovered during OT. EVA: Complete Analysis of Alternatives. Award the Technology Development contract. SOA: Continue the evaluation and authorization of the survival and clothing items.													
<b>Title:</b> Aircraft Systems Development									0.893	1.501	0.635	-	0.635
<b>Articles:</b>									0	0	0		0
<b>Description:</b> ESE includes aircrew endurance modifications for F/A-18 aircraft. CMARS includes a retractor system for rotary and fixed wing aircraft. AS include studies for ACP, CWTS, Oxygen Systems and NESE for non-ejection seat aircraft.													
<b>FY 2010 Accomplishments:</b> CMARS: Continued system development. ESE: Continued fleet assessment of aircrew endurance modifications for F/A-18, T-45, EA-6B and AV-8B aircraft and develop Engineering Change Proposal. Awarded first production contract for F/A-18, T-45, EA-6B. NESE: Completed DT and System Integration testing which included: qualification, ground crew compatibility, verify and validate the seat cushion performance specification parameters and all program KSAs.													
<b>FY 2011 Plans:</b> CMARS: Issue stop-work and complete contract close-out. NESE/ESE: Complete Physical Configuration Review and IOC. Award of follow-on NESE/AV8ESE contract option.													
<b>FY 2012 Base Plans:</b> NESE: Deliver all NESE cushions to fleet. Reach Material Support Date and Navy Support Date.													
Accomplishments/Planned Programs Subtotals									12.154	8.689	3.249	-	3.249
C. Other Program Funding Summary (\$ in Millions)													
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost		
• OPN/4244: Aviation Life Support	48.115	66.720	66.031	14.000	80.031	44.026	37.818	36.307	37.680	Continuing	Continuing		
	5.577	8.084	1.069	0.000	1.069	6.777	12.209	12.443	11.646	69.695	136.465		

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<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APN/0575: <i>Aviation Life Support</i> <i>Mods</i>											
<b>D. Acquisition Strategy</b>											
Commercial Off-The-Shelf /Non-Developmental Items where possible, cost plus award fee contracts. Majority of programs non-ACAT programs.											
<b>E. Performance Metrics</b>											
AE: Performance Metrics to include MS C, FRP and IOC.											
LEP (Spectacle): Performance Metrics to include CDR, MS C, and IOC.											
FDC: Performance Metrics to include CDR, MS C, FRP, and IOC.											
NESE: Performance Metrics to include MS C, FRP and IOC.											

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)	<b>R-1 ITEM NOMENCLATURE</b> PE 0604264N: Air Crew Systems Development	<b>PROJECT</b> 0606: Aircrew System Development
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Eng Aircrew Endurance	C/CPFF	Red Inc:Lexington Park, MD	5.666	1.063	Feb 2011	0.394	Feb 2012	-		0.394	2.572	9.695	9.695
Systems Eng Laser Eye Protection (LEP)	WR	NAWCAD:Patuxent River, MD	3.857	1.096	Dec 2010	0.372	Dec 2011	-		0.372	2.120	7.445	
Systems Eng LEP	C/CPFF	Various:Various	2.122	0.658	Jun 2011	-		-		-	0.000	2.780	2.780
Systems Eng Flight Deck Cranial (FDC)	WR	NAWCAD:Patuxent River, MD	2.700	0.514	Dec 2010	0.732	Dec 2011	-		0.732	0.946	4.892	
Systems Eng FDC	C/CPFF	Various:Various	4.162	0.791	Jan 2011	-		-		-	0.000	4.953	4.953
Systems Eng Joint Helmet Mounted Cueing System (JHMCS) Night Vision Cueing & Display (NVCD)	Various	Various:Various	7.658	0.071	Nov 2010	0.054	Nov 2011	-		0.054	0.227	8.010	
Systems Eng Wide Field of View	Various	Various:Various	1.386	0.464	Nov 2010	-		-		-	19.800	21.650	
Systems Eng Enhanced Visual Acuity	WR	Various:Various	-	-		0.217	Nov 2011	-		0.217	0.000	0.217	
Systems Eng Aircrew Systems	WR	Various:Various	4.785	1.546	Dec 2010	0.295	Dec 2011	-		0.295	17.775	24.401	
Systems Eng Common Mobile Aircrew Restraint System	Various	various:various	10.337	0.705	Apr 2011	-		-		-	Continuing	Continuing	Continuing
Systems Eng Aircraft Sys	WR	Various:Various	38.983	0.796	Dec 2010	0.635	Dec 2011	-		0.635	2.732	43.146	
<b>Subtotal</b>			81.656	7.704		2.699		-		2.699			

**Remarks**

WFOV has been renamed Enhanced Visual Acuity in FY12. Program has been redefined to include enhanced visibility in degraded visual environments as well as expanding the field of view of night vision systems.

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor ETS	C/CPFF	Red Inc:Lexington Park, MD	8.724	0.710	Dec 2010	0.275	Dec 2011	-		0.275	1.744	11.453	11.453

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2012 Navy											<b>DATE:</b> February 2011		
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<b>Management Services (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Contractor MSS	C/CPFF	Tekla:Woodbridge, VA	0.900	0.150	Feb 2011	0.175	Feb 2012	-		0.175	0.300	1.525	1.525
Travel	WR	Various:Various	0.865	0.125	Dec 2010	0.100	Dec 2011	-		0.100	0.490	1.580	
<b>Subtotal</b>			10.489	0.985		0.550		-		0.550	2.534	14.558	

  

	<b>Total Prior Years Cost</b>	<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	92.145	8.689		3.249		-		3.249			

  

**Remarks**

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy			<b>DATE:</b> February 2011
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**Schedule Details**

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Aircrew Endurance</i></b>				
Acquisition Milestones: Milestones: AE: MS C/FRP	3	2011	3	2011
Acquisition Milestones: Milestones: Initial Operational Capability (IOC)	3	2012	3	2012
Test & Evaluation: Aircrew Endurance (AE): DT	1	2010	3	2011
Production Milestones: Contract Awards: AMXD Survivability Upgrade	1	2010	1	2010
Production Milestones: Contract Awards: Aircrew Endurance Vest LRIP	4	2011	4	2011
Production Milestones: Contract Awards: Aircrew Endurance Vest FRP 1	2	2012	2	2012
Production Milestones: Contract Awards: Aircrew Endurance Vest FRP 2	2	2013	2	2013
Production Milestones: Contract Awards: Aircrew Endurance Vest FRP 3	2	2014	2	2014
Production Milestones: Contract Awards: Aircrew Endurance Vest FRP 4	2	2015	2	2015
Production Milestones: Contract Awards: Aircrew Endurance Vest FRP 5	2	2016	2	2016
Deliveries: AMXD Survivability Upgrade	4	2010	2	2012
Deliveries: Aircrew Endurance Vest LRIP	3	2012	2	2013
Deliveries: Aircrew Endurance Vest FRP 1	1	2013	3	2013
Deliveries: Aircrew Endurance Vest FRP 2	4	2013	3	2014
Deliveries: Aircrew Endurance Vest FRP 3	4	2014	3	2015
Deliveries: Aircrew Endurance Vest FRP 4	4	2015	3	2016
Deliveries: Aircrew Endurance Vest FRP 5	4	2016	4	2016
<b><i>Common Mobile Aircrew Restraint System</i></b>				
Acquisition Milestones: Milestones: CMARS: Work Stoppage Issued	1	2011	1	2011
Acquisition Milestones: Milestones: CMARS: Contract Closeout	3	2011	3	2011
<b><i>Joint Helmet Mounted Cueing System</i></b>				

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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Acquisition Milestones: Milestones: JHMCS NVCD: FRP	4	2012	4	2012
Test & Evaluation: Joint Helmet Mounted Cueing System (JHMCS) Night Vision Cueing & Display (NVCD): DT/OT	1	2010	1	2011
Production Milestones: Contract Awards: JHMCS LRIP 1	3	2010	3	2010
Production Milestones: Contract Awards: JHMCS LRIP 2	3	2010	3	2010
Production Milestones: Contract Awards: JHMCS FRP 1	3	2012	3	2012
Production Milestones: Contract Awards: JHMCS FRP 2	3	2013	3	2013
Production Milestones: Contract Awards: JHMCS FRP 3	3	2014	3	2014
Production Milestones: Contract Awards: JHMCS FRP 4	3	2015	3	2015
Production Milestones: Contract Awards: JHMCS FRP 5	3	2016	3	2016
Deliveries: JHMCS LRIP 1	3	2010	4	2011
Deliveries: JHMCS LRIP 2	2	2011	4	2011
Deliveries: JHMCS FRP 1	3	2012	2	2013
Deliveries: JHMCS FRP 2	3	2013	4	2013
Deliveries: JHMCS FRP 3	1	2014	4	2014
Deliveries: JHMCS FRP 4	1	2015	4	2015
Deliveries: JHMCS FRP 5	1	2016	4	2016
<b>Laser Eye Protection</b>				
Acquisition Milestones: Milestones: LEP/SPECTACLE: MS C	3	2011	3	2011
Acquisition Milestones: Milestones: LEP/SPECTACLE: IOC	4	2011	4	2011
System Development: Reviews: Laser Eye Protection(LEP)/SPECTACLE: PDR	3	2010	3	2010
System Development: Reviews: LEP/SPECTACLE:CDR	4	2010	4	2010
Test & Evaluation: LEP/SPECTACLE: DT	1	2011	1	2012
Production Milestones: Contract Awards: Laser Eye Protection FRP 1	4	2012	4	2012

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604264N: <i>Air Crew Systems Development</i>	<b>PROJECT</b> 0606: <i>Aircrew System Development</i>	

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Production Milestones: Contract Awards: Laser Eye Protection FRP 2	4	2013	4	2013
Production Milestones: Contract Awards: Laser Eye Protection FRP 3	4	2014	4	2014
Production Milestones: Contract Awards: Laser Eye Protection FRP 4	4	2015	4	2015
Production Milestones: Contract Awards: Laser Eye Protection FRP 5	4	2016	4	2016
Deliveries: Laser Eye Protection Threat FRP 1	1	2013	1	2013
Deliveries: Laser Eye Protection FRP 2	1	2014	1	2014
Deliveries: Laser Eye Protection FRP 3	1	2015	2	2015
Deliveries: Laser Eye Protection FRP 4	1	2016	2	2016
<b><i>Flight Deck Cranial</i></b>				
Acquisition Milestones: Milestones: FDC: MS C	2	2011	2	2011
Acquisition Milestones: Milestones: FDC: FRP	2	2011	2	2011
Acquisition Milestones: Milestones: FDC: IOC	1	2012	1	2012
Test & Evaluation: Flight Deck Cranial(FDC): DT	1	2010	2	2011
Production Milestones: Contract Awards: EOC Hearing Protection	2	2010	2	2010
Production Milestones: Contract Awards: Flight Deck Cranial LRIP	2	2011	2	2011
Production Milestones: Contract Awards: Flight Deck Cranial FRP 1	2	2011	2	2011
Production Milestones: Contract Awards: Flight Deck Cranial FRP 2	2	2012	2	2012
Production Milestones: Contract Awards: Flight Deck Cranial FRP 3	2	2013	2	2013
Production Milestones: Contract Awards: Flight Deck Cranial FRP 4	2	2014	2	2014
Production Milestones: Contract Awards: Flight Deck Cranial FRP 5	2	2015	2	2015
Production Milestones: Contract Awards: Flight Deck Cranial FRP 6	2	2016	2	2016
Deliveries: EOC Hearing Protection	2	2010	2	2011
Deliveries: Flight Deck Cranial LRIP	2	2011	2	2011
Deliveries: Flight Deck Cranial FRP 1 Vend 1	2	2011	2	2012

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604264N: <i>Air Crew Systems Development</i>	<b>PROJECT</b> 0606: <i>Aircrew System Development</i>	

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Deliveries: Flight Deck Cranial FRP 1 Vend 2	2	2011	2	2012
Deliveries: Flight Deck Cranial FRP 2 Vend 1	3	2012	2	2013
Deliveries: Flight Deck Cranial FRP 2 Vend 2	3	2012	2	2013
Deliveries: Flight Deck Cranial FRP 3 Vend 1	3	2013	2	2014
Deliveries: Flight Deck Cranial FRP 3 Vend 2	3	2013	2	2014
Deliveries: Flight Deck Cranial FRP 4 Vend 1	3	2014	2	2015
Deliveries: Flight Deck Cranial FRP 4 Vend 2	3	2014	2	2015
Deliveries: Flight Deck Cranial FRP 5 Vend 1	3	2015	2	2016
Deliveries: Flight Deck Cranial FRP 5 Vend 2	3	2015	2	2016
Deliveries: Flight Deck Cranial FRP 6Vend 1	3	2016	4	2016
Deliveries: Flight Deck Cranial FRP 6 Vend 2	3	2016	4	2016
<b>Non-Ejection Seat Endurance</b>				
Acquisition Milestones: Milestones: Non-Ejection Seat Endurance(NESE): MS C	4	2010	4	2010
Acquisition Milestones: Milestones: NESE: FRP	2	2011	2	2011
Acquisition Milestones: Milestones: NESE: IOC	1	2012	1	2012
Production Milestones: Contract Awards: H-53	2	2011	2	2011
Production Milestones: Contract Awards: H-60, V-22,E-2/C-2	3	2011	3	2011
Production Milestones: Contract Awards: H-1	4	2011	4	2011
Deliveries: H-53 Qty 430	1	2012	3	2012
Deliveries: H-60 Qty 564 , V-22 Qty 326 ,E-2/C-2 Qty 425	2	2012	4	2012
Deliveries: H-1 Qty 402	3	2012	1	2013

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